



State of Utah

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December 4, 2002

TO: Internal File

THRU: Karl R. Houskeeper, Sr. Reclamation Specialist/Team Lead *KRH by an*

FROM: Dana Dean, P.E., Reclamation Specialist/Hydrology *DD*

RE: South Portals, Genwal Resources, Inc., Crandall Canyon Mine, C/015/032-AM02A-1

SUMMARY:

Proposed changes to Genwal Resources, Inc.'s Crandall Canyon Mine were resubmitted on November 22, 2002. These changes involve the construction of new portals in the coal outcrop in the southern portion of the disturbed area. The plan calls for one new culvert to be placed beneath the ramp leading to the new portals. This memo addresses the Hydrology portion of the proposed plan.

Information found in the proposal is considered adequate to meet the requirements of the regulations.

The amendment should be approved and incorporated into the current MRP.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Diversions: Miscellaneous Flows

The plan proposes to add one new culvert in the South Portal area. Culvert C-11A will be placed under the proposed access ramp leading up to the South Portals. This culvert will divert sheet flow drainage from the upper material yard to existing diversions that will carry the flow to the sedimentation pond. Calculations for sizing the culvert were performed using the SCS- TR55 method and Manning's equation, and can be found in Appendix 7-4.

Diversion ditch 12 will be shortened to allow for the placement of the proposed ramp. DD-12 will be 50' long instead of 500'.

Stream Buffer Zones

According to Plate 7-5, portal construction will take place within 100' of Crandall Creek, a perennial stream. However, this will not affect the quality or quantity of flow in Crandall Creek since the Main Canyon Culvert protects it. The Main Canyon Culvert is 6 feet in diameter and follows the natural channel through the mine site.

Siltation Structures: Sedimentation Ponds

The disturbed area will not be increased and the existing sedimentation pond was originally sized to accommodate the South Portal expansion. The existing pond should be adequate to control all disturbed area runoff, including that from the new culvert, C-11A.

Findings:

Information provided in the application is considered adequate to meet the minimum Hydrologic Information requirement of the Regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities Maps

Plate 7-5 shows the entire drainage plan for the Crandall Canyon Mine, including the South Portal Expansion.

Certification Requirements

Plate 7-5 has been properly certified by a registered professional engineer as required in the rules.

Findings:

Information provided in the application is considered adequate to meet the minimum Maps, Plans and Cross Sections of Mining Operations requirement of the Regulations.

RECOMMENDATION:

It is recommended that this application be approved and incorporated into the MRP.